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CONTENTS

Highlights	3
Defining Support	3
Support Software	3
Compaq QuickRestore CD	3
Compaq Software CD	3
Compaq Support Software CD	3
Preinstalled Operating Systems	4
Supported Operating Systems	5
Supported Features by Operating System	5
Windows 95	7
Microsoft Windows NT 4.0 ...	11
DOS 6.2x & Windows 3.1x ...	13
Microsoft Windows NT 3.51..	16
IBM OS/2 Warp 3.0 & 4.0.....	17
Frequently Asked Questions	19

Operating System Support for Compaq Portable Platforms

The purpose of this White Paper is to present operating system features supported on Compaq portable computers. Compaq supports Microsoft DOS 6.2x, Windows 3.1x, Windows for Workgroups 3.1x, Windows 95, Windows NT 4.0, and IBM OS/2 Warp. In addition to features inherently supported in the operating system itself, Compaq also provides software to enhance the user experience and usability of the mobile PC. Specific Compaq software deliverables are reviewed here as well as information about the various ways customers can obtain these components. Features supported through Compaq software include:

- *Software to manage and extend battery life*
- *Software to enhance the ease of use and configuration of PC Cards*
- *Intelligent Manageability software to provide Asset Control, Fault Prediction, and Security*
- *Multibay support to enable warm and hot swapping of IDE devices*
- *Programmable Keys utility to support four special keyboard keys*
- *Infrared support for ease of use in wireless transfers of speeds up to 4Mbps*
- *Communications software to provide telephony capabilities and enhance ease of use*

This is the second edition of the document. This edition includes minor updates to include the Armada 4200 as well as the Armada 7800 platform.

This document is intended external audiences with a need for information about operating system support for Compaq commercial portables.

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Operating System Support for Compaq Portable Platforms

Second Edition (February 1998)

First Edition (September 1997)

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HIGHLIGHTS

This edition includes operating support information for new and recently announced platforms. These new platforms no longer support legacy operating systems currently being supported by Compaq on earlier notebook families. The following briefly highlights these changes:

- (1) All notebooks currently shipping with a Windows NT 4.0 also include Service Pack 3. Compaq continues to support those customers who choose to continue using Service Pack 2.
- (2) Armada 7800 is the first platform family in the Desktop Equivalent/Performance segment to no longer support IBM OS/2 Warp, Microsoft Windows NT 3.51 or Windows 3.1x.
- (3) Armada 7800 is the first platform to include the Compaq QuickRestore CD with the notebook. This CD support tool replaces the Armada Software CD currently being provided for all other shipping platforms.
- (4) The Armada 4200 is the first platform family in the Mobility segment to no longer support IBM OS/2 Warp or Microsoft Windows NT 3.51.

DEFINING SUPPORT

Compaq supports all operating systems that are currently preinstalled by Compaq on its portable computers. Today, the preinstalled operating systems are Windows 95 OSR2 and Windows NT 4.0 with Service Pack 3. These operating systems support all hardware features. For legacy operating systems such as Windows 3.1x, Windows NT 3.51 or IBM OS/2 Warp 3.0 & 4.0, Compaq provides support; however, in some cases, limitations in the operating system prevent enabling of new hardware functionality included on newer hardware platforms.

SUPPORT SOFTWARE

Compaq software support is available to customers in a number of different ways including various support CD-ROM (CD) disks, individual SoftPaq diskettes and the Compaq Web site.

Compaq QuickRestore CD

The Compaq QuickRestore CD is currently only being shipped with the Armada 7800. The CD provides an easy to use and complete restore solution. The pre-installed operating system (i.e. either Windows 95 or Windows NT 4.0) and all Compaq software enhancements are provided on the CD. The solution allows customers to perform a complete restore including destructive format as well as a refresh option that does not reformat the hard drive thus preserving data and applications. The Compaq QuickRestore CD is shipped with each notebook and cannot be provided through fulfillment.

Compaq Software CD

The Compaq Software CD is made available for each portable product at the time of announcement beginning with products introduced in 1997. The Software CD contains all drivers and Compaq software for all supported operating systems including those that may have been preinstalled. The Software CD does not include the operating system itself. Customers can purchase the Software CD by contacting Compaq Customer Service & Support.

Compaq Support Software CD

The Compaq Support Software CD set is yet another way for customers to get access to the latest drivers and software for their computer. This set of three CDs is updated monthly with new files

NOTE:

In this White Paper, all references to Microsoft Windows NT 4.0 should be taken to mean Windows NT Workstation 4.0.

also made available on the Compaq Web site. This CD contains support files for not only Compaq portables, but desktop and workstation computers as well. It is the ideal tool for the corporate MIS professional responsible for maintaining a number of different types of Compaq personal computers. The Software Support CD set can be purchased via an annual subscription or as a one-time purchase.

Customers who do not need the additional convenience of having all drivers and other support software on single CD can download individual software drivers and utilities, called SoftPaks, from the Compaq Web site at www.compaq.com.

Unless otherwise noted, all Compaq software deliverables referenced in this White Paper are available through all three mediums for distribution.

PREINSTALLED OPERATING SYSTEMS

Compaq currently gives customers the choice of Microsoft Windows 95 or Windows NT 4.0 as the preinstalled operating system. Windows 95 is available as the preinstalled operating system for the Armada 1500, Armada 4100 and Armada 7000 families. Windows NT 4.0 is available on select models in the Armada 1500 and Armada 7000 families. Compaq will begin to phase out dual Windows 95 and Windows NT 4.0 installations beginning in 3Q97. Table 1 summarizes the various combinations of operating systems available for preinstall by portable product family.

PREINSTALLED OPERATING SYSTEMS

Operating Systems	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
DOS/Windows 3.1x and Windows 95 OSR1 Dual Installation	YES	NO	NO	NO	NO	NO
Windows 95 OSR 2.1 and Windows NT 4.0 (with Service Pack 2) Dual Installation	NO	YES ¹	NO	NO	YES ²	NO
Windows 95 OSR1 Single Installation	NO	NO	YES ³	NO	NO	NO
Windows 95 OSR2.1 Single Installation	NO	YES	YES ⁴	YES	YES	YES
Windows NT 4.0 with Service Pack 3 Single Installation	NO	NO	NO	NO	YES	YES

Table 1 - Preinstalled Operating Systems

¹ Compaq will discontinue dual installed on the Armada 1530DM, 1550DMT and 1580DMT beginning in 3Q97.

² Compaq will discontinue dual installed on the Armada 7710MT, 7730MT, 7750MT, 7330MT and 7350MT beginning in 3Q97.

³ Windows 95 OSR1 was preinstalled on the Armada 4100, 4110, 4115, 4110D, 4120, 4125D, 4120T, 4125T, 4130T, 4136T, 4135T, 4131T only.

⁴ Windows 95 OSR2 was single installed on the Armada 4150, 4150T and 4160T.

SUPPORTED OPERATING SYSTEMS

In addition to supporting preinstalled operating systems, Compaq offers standard feature support for legacy operating systems that are not preinstalled. Table 2 summarizes support offered for each operating system by product family.

SUPPORTED OPERATING SYSTEMS

Operating Systems	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
DOS/Windows 3.1x	Supported	Supported	Supported	Supported	Supported	Not Supported
Windows 95 OSR1	Supported	Supported	Supported ⁵	Supported	Supported	Supported
Windows 95 OSR2	Not Supported	Supported	Supported ⁶	Supported	Supported	Supported
Windows NT 3.51	Supported	Supported	Supported	Not Supported	Supported	Not Supported
Windows NT 4.0 with Service Pack 2	Supported	Supported	Supported	Supported	Supported	Supported
Windows NT 4.0 with Service Pack 3	Supported	Supported	Supported	Supported	Supported	Supported
OS/2 Warp 3.0 & 4.0	Supported	Not Supported	Supported	Not Supported	Supported	Not Supported

Table 2 – Supported Operating Systems

The following sections list major Compaq software deliverables for each supported operating system. Customers should refer to the Compaq Web site or Compaq Support Software CD for the latest revisions and information regarding these software components.

SUPPORTED FEATURES BY OPERATING SYSTEM

Table 3 summarizes major software functionality and hardware support by operating system on Compaq portable computers. Some of this support is provided through Compaq device drivers and utilities, while other support is inherent to the operating system. The list is not intended to be exhaustive; only a high level review of functional areas found to be of most interest to Compaq portable customers are noted.

⁵ Standard Windows 95 OSR1 feature support is offered for the Armada 4150, 4150T and 4160T. Extended feature support for Windows 95 OSR1 on all other Armada 4100 models.

⁶ Extended feature support for Windows 95 OSR2 on the Armada 4150, 4150T and 4160T.

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NOTE:

“CC” represents functionality provided through a specific Compaq software or firmware component.

“OS” represents functionality provided by the operating system itself.

“CC/OS” represents functionality that is supported by the native operating system but which is enhanced through additional software components provided by Compaq.

“NA” represents functionality that is not available on Compaq portable platforms.

SUPPORTED FEATURES⁷

	DOS & Windows 3.1x	Windows 95	Windows NT 3.51	Windows NT 4.0	OS/2 Warp 3.0 & 4.0
Compaq Audio Drivers	CC	CC	CC	CC	CC
Compaq Video Drivers	CC	CC	CC	CC	CC
Power Management					
Standby	CC	CC	CC	CC	CC
Hibernation	CC	CC	CC	CC	CC
Power conservation timers ⁸	CC	CC	CC	CC	CC
APM Support ⁹	OS	OS	NA	CC/OS	NA
Programmable Keys	CC	CC	CC	CC	CC
PC Card Support					
PC Card 16 Support	CC	OS	OS	CC/OS	OS
CardBus (32-bit) Support	CC ¹⁰	OS	NA	CC	NA
Plug 'n Play Support	CC	OS	NA	CC ¹¹	NA
Compaq Ethernet Network Drivers	CC	CC	CC	CC	OS
Compaq Intelligent Manageability	NA	CC	NA	CC	NA
Multibay Exchange ¹²	NA	NA	NA	CC	NA
Infrared Support					
1.15 Mbps Transfer	CC	OS	NA	NA	NA
4 Mbps Transfer	NA	CC	NA	NA	NA

⁷ Some features are not supported on all platforms where limitations in the hardware prevent a feature from being enabled.

⁸ Includes hard drive spin-down and screen blank.

⁹ Microsoft Windows 3.1x does support APM version 1.1. Customers interested in power management support under IBM OS/2 Warp should contact IBM directly for more information.

¹⁰ Armada 1500 and Armada 7000 families only.

¹¹ For Plug 'n Play support, some limitations exist with some PC Cards and is dependent on the PC Card drivers. Contact your PC Card vendor for more information about Plug 'n Play support under Windows NT 4.0.

¹² Multibay Exchange refers to warm swapping support for CDROM, floppy drive and batteries in the Compaq multibay.

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	DOS & Windows 3.1x	Windows 95	Windows NT 3.51	Windows NT 4.0	OS/2 Warp 3.0 & 4.0
Compaq Software MPEG Support	NA	CC/OS	NA	CC	NA
Communications					
Data Support	OS	OS	OS	OS	OS
Facsimile Support	OS ¹³	OS	NA	CC ¹⁴	OS ¹⁵
Telephony Functionality ¹⁶	NA	CC	NA	NA	NA
DSVD ¹⁷	OS	OS	OS	OS	OS

Table 3 – Supported Features

Windows 95

Windows 95 is currently being preinstalled on the Armada 1500, Armada 4100, Armada 4200, Armada 7700, 7300 and 7800 families. The version being used is the OEM Service Release 2 (OSR2) which has been enhanced over the previous Windows 95 OSR1 release and the currently shipping retail version of Windows 95. Windows 95 OSR2 enables key hardware in the latest portable products and provides support for Compaq software that is not available under OSR1. For customers who choose to downgrade to OSR1 or the retail version of Windows 95, Compaq only supports those features inherently supported in the operating system. Table 4 lists new features and hardware support introduced with Windows 95 OSR2 and which are not supported under Windows 95 OSR1. For more information on using Windows 95 OSR1 on Compaq portable products, refer to the White Paper titled *Compaq Armada Portable Products with Microsoft Windows 95 OSR1* published August 1997.

NEW FEATURE & HARDWARE SUPPORT UNDER WINDOWS 95 OSR2

Feature	Description
FAT32	Enhancements to the Windows 95 FAT file system designed to efficiently support large hard disks, up to 2 Terabytes in size. Includes updates to FDISK, Format, Scandisk, and Defrag disk utilities to support FAT32 partitions.
DriveSpace Update	Windows 95 DriveSpace compression utility now supports compressed volumes up to 2 GB in size. Note: DriveSpace compression is not supported on FAT32 volumes.
Power Management Improvements	Support for Advanced Power Management (APM) 1.2 BIOS, wake-on-ring for modems, multi-battery PC's, drive spin down, and powering down of inactive PCMCIA modems.

¹³ Requires third-party software application not provided by Compaq.

¹⁴ Compaq provides the Trio Communications Suite for Windows NT 4.0 on the Armada 7700 and 7300 families. This application was removed from the Armada 7800 Windows NT 4.0 pre-install image because it is a 16-bit application. Microsoft logo certification requirements with which the Armada 7800 complies do not allow any 16-bit software to be included on the pre-install image. Compaq is currently working to qualify a 32-bit data/fax application for inclusion on future platforms and provided through fulfillment on currently shipping platforms including the Armada 7800.

¹⁵ Requires third-party software application not provided by Compaq.

¹⁶ Telephony includes such features as telephone answering machine and speakerphone.

¹⁷ Digital Simultaneous Voice Data (DSVD) allows for simultaneous voice and data over the same telephone connection. It is only provided on portable products that include a DSVD enabled modem. Compaq does not provide specific software applications to enable DSVD with the exception of the DSVD Enabler for Microsoft NetMeeting provided on select models pre-installed with Windows 95.

IMPORTANT!

Customers who downgrade from the preinstalled version of Windows 95 OSR2 to an earlier version of Windows 95 will lose key functionality. Compaq strongly recommends that customers do not downgrade.

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Feature	Description
Storage Enhancements	Support for IDE Bus Mastering, 120M Floptical disk drives, removable IDE media, Zip drives, and CD Changers. Also adds the SMART predictive disk failure API's.
PC Card Enhancements	Adds support for new PC Card 32 (CardBus) bridges, PCMCIA cards that operate at 3.3 volts rather than 5 volts, multifunction PCMCIA network/modem cards, and PCMCIA Global Positioning Satellite (GPS) devices.
CDFS Enhancements	Support for ISO 9660 disks up to 4 GB in size, and CD-I format CD-ROMs.
PCI Bridging & Docking	Support for PCI devices for use in PCI docking stations.
IRQ Routing	Support for new PCI interrupt routers.
Intel MMX Support	Support for third parties to build software that exploits the Intel Pentium Multimedia Extensions (MMX) for fast audio and video support on the next generation of Intel Pentium processor.
NDIS 4.0 Support	Adds support for new NDIS 4.0 network interface card drivers.
Automatic Scandisk On Boot	In situations where the PC was not shut down normally, Scandisk will automatically run at the next reboot in order to check for damaged files.
Online Service Folder	Client software for America Online 3.0, CompuServe 3.0, CompuServe WOW!, and AT&T Worldnet.

Table 4 - New Feature & Hardware Support Under Windows 95 OSR2

Refer to Table 5 for information on specific Compaq software deliverables for Windows 95 by product family.

Besides meeting stringent internal criteria for Windows 95 compatibility, all Compaq portable products have passed the rigorous Microsoft Windows Hardware Compatibility Test. Information on Compaq portable computer certifications can be found on the Microsoft Web site at <http://www.microsoft.com>.

Tip:

If you are viewing this document online, clicking on a software deliverable will take you to the appropriate support page on the Compaq Web site. Always refer to the Compaq Web site or the Compaq Support Software CD for the latest revisions of drivers, utilities and other software from Compaq.

WINDOWS 95 SOFTWARE DELIVERABLES

Windows 95 ¹⁸	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
Enabling Audio Hardware	ESS 688/1688 Audio Driver Support for Windows 95	ESS 1878 Audio Driver Support for Windows 95	ESS Direct Sound Support for Windows 95	Armada 4200 ESS Audio Drivers for Windows 95	ESS 1878 Audio Driver Support for Windows 95	ESS 1878 Audio Driver Support for Windows 95
Enhanced Audio Functionality						ESS 1788 Audio Rack Drivers for Windows 95

¹⁸ For the most up-to-date drivers, applications and patches refer to the Compaq Web site at www.compaq.com or the latest Compaq Software Support CD.

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Windows 95 ¹⁸	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
Enabling Video Hardware	Cirrus Logic GD7543 Display Driver for Windows 95	Cirrus Logic GD7548 Display Driver for Windows 95	Cirrus Logic GD7548 Display Driver for Windows 95	Chips and Technologies Video Driver for Windows 95	S3 Display Drivers for Windows 95	S3 Display Drivers for Windows 95
	Cirrus Logic GD7548 Display Driver for Windows 95 ¹⁹					
Enhanced Video Functionality		Microsoft-DirectX 3 MediaMatics MPEG Player Support for Windows 95	Microsoft-DirectX 3 MediaMatics MPEG Player Support for Windows 95	Armada 4200 Direct X 5 Drivers MediaMatics Arcade MPEG Player	Microsoft-DirectX 3 S3 Display Utility for Windows 95	Microsoft-DirectX 5.0 S3 Display Utility for Windows 95
Enabling Networking		Integrated Netflex-3 Ethernet Drivers for Windows 3.1x/MS-DOS		Armada 4200 Ethernet Drivers	Integrated Netflex-3 Ethernet Drivers	Integrated Netflex-3 Ethernet Drivers
Enabling PC Card Hardware		Microsoft Card Services for Windows 95 OSR2 ²⁰	Microsoft Card Services for Windows 95 OSR2 ²¹		Microsoft Card Services for Windows 95 OSR2 ²² True Flash File System for Windows 95	Microsoft Card Services for Windows 95 OSR2 ²³ True Flash File System for Windows 95
Unique Compaq Software Functionality	Intelligent Manageability Insight Agents for Windows 95	Intelligent Manageability Insight Agents for Windows 95 Programmable Keys Utility	Intelligent Manageability Insight Agents for Windows 95 Programmable Keys Utility	Armada 4200 IM Agents for Windows 95 and NT 4.0 Programmable Keys Utility for Windows 95 and NT 4.0	Intelligent Manageability Insight Agents for Windows 95 Programmable Keys Utility	Intelligent Manageability Insight Agents for Windows 95 Programmable Keys Utility

¹⁹ For the LTE 5380 only.

²⁰ For Windows 95 OSR2 only.

²¹ For Windows 95 OSR2 only.

²² For Windows 95 OSR2 only.

²³ Provided as part of the Compaq Systems Enhancements diskette for the Armada 7800.

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Windows 95 ¹⁸	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
Enabling Input Device Hardware	Microsoft Infrared Drivers for Windows 95	Compaq Fast IR drivers for Portables Armada 1500/4100 ALPS Glidepoint Drivers Japanese	Microsoft Infrared Drivers for Windows 95 Armada 1500/4100 ALPS Glidepoint Drivers Japanese			
Power Management, Extended Security Features, Hibernation, Multibay Interchange and Compaq Hot Keys	Supplemental Programs for Windows 95 ²⁴	Supplemental Programs for Windows 95	Supplemental Programs for Windows 95	Compaq Power Management for Windows 95 Armada 4200 Security 32 Support	Supplemental Programs for Windows 95	Power Management for Windows 95 Security 32 for Windows 95 Multibay Interchange Support for Windows 95
Enabling Communications Hardware	Support for Compaq Portable Telephony Modem ²⁵	Support for Compaq Portable Telephony Modem			Compaq NetMeeting DSVD Enabler Applet	

²⁴ For all LTE models except the 5380.

²⁵ For the LTE 5150, 5250, 5280, 5380 and 5400 only.

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Windows 95 ¹⁸	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
Enhanced Operating Systems Support	DOS Real Mode Support for Windows 95			Notebook Universal Serial Bus Support	System Enhancements for Windows 95	System Enhancements for Windows 95 Notebook Universal Serial Bus Support
Setup & Diagnostics	Compaq Diagnostics for Windows 3.1x /Windows 95 Computer Setup and Diagnostics for Portables	Compaq Diagnostics for Windows 3.1x /Windows 95 F10 Computer Setup for Armada 1500, 7300, and 7700	Compaq Diagnostics for Windows 3.1x /Windows 95 Computer Setup and Diagnostics for Portables Compaq Diagnostics for Armada 4100 Family - Ethernet Base Computer Setup for Armada 4160T	Armada 4200 Personal Computer Diagnostics	F10 Computer Diagnostics F10 Computer Setup	F10 Computer Diagnostics F10 Computer Setup

Table 5 - Windows 95 Software Deliverables

Microsoft Windows NT 4.0

Windows NT 4.0 with Service Pack 3 (SP3) is currently being preinstalled on select models within the Armada 1500 and Armada 7000 families. (Refer to Table 2 for information on preinstalled operating systems by portable family). It is a supported operating system on all models within the LTE 5000, Armada 1500, Armada 4100 and Armada 7000 families. Compaq software deliverables extend functionality or enhance the overall user experience. Refer to Table 6 for information on specific Compaq software deliverables for Windows NT 4.0 by product family.

Microsoft periodically releases updates to the Windows NT 4.0 operating system in the form of Microsoft Service Packs. To date, there have been three Service Packs released. Each Service Pack includes upgrades, patches and new software components that introduce new functionality. Once a Service Pack has been installed it is integrated into the operating system.

On portable platforms where Windows NT 4.0 is the preinstalled operating system, Service Pack 3 is also preinstalled. All Compaq portable products that support Windows NT 4.0 support Service Pack 2. Compaq does not support Service Pack 1 or the retail version of Windows NT 4.0.

Compaq strongly recommends an upgrade to Service Pack 3 for customers who have not installed any Service Pack or who are using an earlier Service Pack version.

Besides meeting stringent internal criteria for Windows NT 4.0 compatibility, all Compaq portable products have passed the rigorous Microsoft Windows Hardware Compatibility Test. Information

NOTE:

Each version of a Microsoft Service Pack includes all necessary upgrades, patches and functionality enhancements included in prior releases. In order to have the latest update from Microsoft it is only necessary to install the latest Service Pack.

on Compaq portable computer certifications can be found on the Microsoft Web site at <http://www.microsoft.com>.

WINDOWS NT 4.0 SOFTWARE DELIVERABLES

Windows NT 4.0 ²⁶	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
Enabling Audio Hardware	ESS 688/1688/178 8 Audio Drivers for Windows NT 4.0	ESS 1878 Audio Driver for Windows NT 4.0	ESS 688/1688/178 8 Audio Drivers for Windows NT 4.0		ESS 1878 Audio Drivers for Windows NT 4.0	ESS 1879 Audio Drivers for Windows NT 4.0
Enabling Video Hardware	Cirrus Logic GD7543/GD7 548 Display Drivers for Windows NT 4.0	Cirrus Logic GD7543/GD7 548 Display Drivers for Windows NT 4.0	Cirrus Logic GD7543/GD7 548 Display Drivers for Windows NT 4.0	Chips and Technologies Video Driver for Windows NT 4.0	S3 Aurora Display Driver Support Windows NT 4.0	S3 Aurora Display Driver Support Windows NT 4.0
Enhanced Video Functionality					S3 Display Utility for Windows NT 4.0	S3 Display Utility for Windows NT 4.0
Enabling Networking		Integrated Netflex-3 Ethernet Drivers for Windows NT 4.0	Convenience Base Ethernet Drivers for Windows NT 4.0	Armada 4200 Ethernet Drivers	Integrated Netflex-3 Ethernet Drivers for Windows NT 4.0	Integrated Netflex-3 Ethernet Drivers for Windows NT 4.0
Unique Compaq Software Functionality		Intelligent Manageability Insight Agents for Windows NT 4.0	Intelligent Manageability Insight Agents for Windows NT 4.0	Armada 4200 IM Agents for Windows 95 and NT 4.0 Programmable Keys Utility for Windows NT 4.0	Intelligent Manageability Insight Agents for Windows NT 4.0 Programmable Keys Utility for Windows NT 4.0	Intelligent Manageability Insight Agents for Windows NT 4.0 Programmable Keys Utility for Windows NT 4.0

²⁶ For the most up-to-date drivers, applications and patches refer to the Compaq Web site at www.compaq.com or the latest Compaq Software Support CD.

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Windows NT 4.0 ²⁶	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300	Armada 7800
Enabling PC Card Hardware ²⁷	CardWare NT for Windows NT 4.0 ²⁸	CardWare NT for Windows NT 4.0 ²⁹	CardWare NT for Windows NT 4.0 ³⁰	Compaq PC Card Support for Windows NT 4.0	CardWare NT for Windows NT 4.0 ³¹	CardWare NT for Windows NT 4.0
Power Management, Extended Security Features, Hibernation, Multibay Interchange and Compaq Hot Keys	Supplemental Programs for Windows NT 4.0	Supplemental Programs for Windows NT 4.0	Supplemental Programs for Windows NT 4.0	Notebook Power Management for Windows NT 4.0 Armada 4200 Security 32 Support Armada Multibay Drivers for Windows NT 4.0 (Service Pack 3)	Support Diskette for Windows NT 4.0 Power Management for Windows NT 4.0 ³²	Multibay Interchange Support
Setup & Diagnostics	Computer Setup and Diagnostics for Portables	F10 Computer Setup for Armada 1500, 7300, and 7700	Computer Setup for Armada 4100 Computer Setup and Diagnostics for Portables Compaq Diagnostics for Armada 4100 Family - Ethernet Base Computer Setup for Armada 4160T		F10 Computer Diagnostics for Armada 7300 and 7700 Series F10 Computer Setup for Armada 1500, 7300, and 7700	F10 Computer Diagnostics F10 Computer Setup

Table 6 - Windows NT 4.0 Support Matrix

DOS 6.2x & Windows 3.1x

Although Microsoft does not plan to continue development for DOS or Windows 3.1x, both operating systems still account for a significant share of the installed user base. Some corporate customers have opted to stay with Windows 3.1x until Windows 98 or Windows NT 5.0. For this reason Compaq will continue to provide support for DOS 6.2x and Windows 3.1x. Support for

²⁷ CardWare NT v2.08 will not be available on the Compaq Web site. It is available on the Armada 1500 Software CD v1.0, the Armada 7000 Software CD v1.1 or on diskette.

²⁸ Available 4Q97.

²⁹ Available late 3Q97 on the Armada 7000 Software CD.

³⁰ Available 4Q97.

³¹ Available late 3Q97.

³² Provides hibernation support only. This version will not work with Service Pack 3. An updated power management utility will be released early 4Q97. In the meantime customers should be aware that they will lose existing power management functionality should they upgrade to Service Pack 3.

DOS 6.2x and Windows 3.1x means that the operating systems install correctly and enable all hardware supported by Microsoft with the native operating system. In addition to functionality inherently supported by the base operating system, software deliverables are provided to extend functionality or enhance the overall user experience. However, Compaq does not support new hardware features and functionality that is not supported by the operating system. Examples of unsupported hardware features include 32-bit CardBus PC Cards and high-speed infrared (i.e. transfer speeds up to 4Mbps). Customers who encounter difficulties that are not directly related to a Compaq provided driver or utility should contact Microsoft directly. Refer to Table 7 for information on specific Compaq software deliverables for DOS 6.2x and Windows 3.1x by product family.

Compaq software deliverables are available as individual SoftPaqs and can be obtained by contacting Compaq Customer Service & Support or on the Compaq Web site at www.compaq.com. For additional convenience Compaq software deliverables are also available on CD. See the section titled *Support Software* for more information.

Standard feature support for Microsoft DOS 6.2x and Windows 3.1x will continue to be provided for products announced in 1Q98.

DOS/WINDOWS 3.1X SOFTWARE DELIVERABLES

DOS/Windows 3.1x ³³	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300
Enabling Audio Hardware	ESS 688 Audio Drivers for Windows 3.1x / MS-DOS ³⁴	ESS 1878 Audio Drivers for Windows 3.1x/MS-DOS	ESS 1788 Audio Drivers for Windows 3.1x / MS-DOS	Armada 4200 ESS Audio Drivers for Windows 3.1	ESS 1878 Audio Drivers for Windows 3.1x/MS-DOS
	ESS 1688 Audio Drivers for Windows 3.1x / MS-DOS ³⁵				
Enhanced Audio Functionality		ESS 1878 Audio Rack Drivers for Windows 3.1x/MS-DOS	ESS 1878 Audio Rack Drivers for Windows 3.1x/MS-DOS		
Enabling Video Hardware	Cirrus Logic GD7543 Video Drivers for MS-DOS ³⁶	Cirrus Logic GD7548 Video Drivers for Windows 3.1	Cirrus Logic GD7548 Video Drivers for Windows 3.1	Chips and Technologies Video Support for Windows 3.1	S3 Video Drivers for Windows 3.1x
	Cirrus Logic GD7543 Video Drivers for Windows 3.1x ³⁷	Cirrus Logic GD7548 Video Drivers for Windows 3.1	Cirrus Logic GD7548 Video Drivers for Windows 3.1		
	Cirrus Logic GD7548 Video Drivers for Windows 3.1 ³⁸				

³³ For the most up-to-date drivers, applications and patches refer to the Compaq Web site at www.compaq.com or the latest Compaq Support Software CD.

³⁴ For the LTE 5000, 5100 and 5200 only.

³⁵ For the LTE 5150, 5250, 5280, 5300, 5380 and 5400 only.

³⁶ For the LTE 5000, 5100, 5150, 5200, 5250, 5280, 5300 and 5400 only.

³⁷ For the LTE 5000, 5100, 5150, 5200, 5250, 5280, 5300 and 5400 only.

WHITE PAPER (cont.)

DOS/Windows 3.1x ³³	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300
Enhanced Video Functionality		MediaMatics MPEG Player Support for Windows 3.1x Microsoft Video for Windows 3.1x	MediaMatics MPEG Player Support for Windows 3.1x Microsoft Video for Windows 3.1x		
Enabling Networking	Network Support Drivers for LTE 5000 for Windows 3.1x and MS-DOS 6.x	Integrated Netflex-3 Ethernet Drivers Windows 3.1x/ MS-DOS	Ethernet Drivers for Armada 4100 Convenience Base Network Support Drivers for Windows 3.1x	Ethernet Drivers for Armada 4000 Convenience Base	Integrated Netflex-3 Ethernet Drivers Windows 3.1x/ MS-DOS
Enabling Storage Devices	IDE CD-ROM Drivers for MS- DOS/Windows 3.1x	IDE CD-ROM Drivers for MS- DOS/Windows 3.1x	IDE CD-ROM Drivers for MS- DOS/Windows 3.1x		IDE CD-ROM Drivers for MS- DOS/Windows 3.1x
Unique Compaq Software Functionality		Programmable Keys Utility for Windows 3.1x	Programmable Keys Utility for Windows 3.1x		Programmable Keys Utility for Windows 3.1x
Enabling Input Device Hardware		Glide Point Touchpad Drivers for Windows 3.1x Armada 1500/4100 ALPS Glidepoint Drivers Japanese	Glide Point Touchpad Drivers for Windows 3.1x Armada 1500/4100 ALPS Glidepoint Drivers Japanese		Armada 7000 Counterpoint IR Drivers
Enhanced PC Card Functionality ⁴⁰	CardWizard for Windows 3.1x	CardWizard for Windows 3.1x	CardWizard for Windows 3.1x	Notebook CardWizard for Windows 3.1	CardWizard for Windows 3.1x
Power Management, Extended Security Features and Compaq Hot Keys		Supplemental Programs for Windows 3.1x Supplemental Programs for MS-DOS	Supplemental Programs for Windows 3.1x Supplemental Programs for MS-DOS		Supplemental Programs for Windows 3.1x Supplemental Programs for MS-DOS

³⁸ For the LTE 5380 only.

³⁹ For the Armada 4110, 4120, 4125 and the 4130 only.

⁴⁰ CardWizard v3.14 and CardWizard v5.31 are not available on the Compaq Web site. It is available on the Armada 1500 Software CD v1.0, the Armada 4100 Software CD v1.1, the Armada 7000 Software CD v1.1 or on diskette.

WHITE PAPER (cont.)

DOS/Windows 3.1x ⁴³	LTE 5000	Armada 1500	Armada 4100	Armada 4200	Armada 7700 & 7300
Enabling Communications Hardware	Support for Compaq Portable Telephony Modem ⁴¹		Support for Compaq Portable Telephony Modem		Support for Compaq Portable Telephony Modem
Setup & Diagnostics	Compaq Diagnostics for Windows 3.1x /Windows 95 Computer Setup and Diagnostics for Portables	Compaq Diagnostics for Windows 3.1x /Windows 95 F10 Computer Setup for Armada 1500, 7300, and 7700	Compaq Diagnostics for Windows 3.1x /Windows 95 Computer Setup and Diagnostics for Portables Computer Setup and Diagnostics for Portables Compaq Diagnostics for Armada 4100 Family - Ethernet Base Computer Setup for Armada 4160T	Armada 4200 Personal Computer Diagnostics Computer Setup for Armada 4200	F10 Computer Diagnostics for Armada 7300 and 7700 Series F10 Computer Setup for Armada 1500, 7300, and 7700

Table 7 - DOS/Windows 3.1x Software Deliverables

Microsoft Windows NT 3.51

Although no longer sold by Microsoft, Compaq continues to support Windows NT 3.51 on the LTE 5000, Armada 1500, Armada 4100 and Armada 7000 families. Windows NT 3.51 installs correctly and fully enables all hardware supported by Microsoft under the native operating system. Given that hardware technology has advanced since Windows NT 3.51 was first released, some features of the hardware will not be available. Examples of unsupported hardware features include 32-bit CardBus PC Cards, Plug 'n Play device support and Infrared. In addition to functionality inherently supported by the operating system, Compaq software deliverables are provided to extend functionality or enhance the overall user experience. Refer to Table 8 for information on specific Compaq software deliverables for Windows NT 3.51 by product family.

Windows NT 3.51 software deliverables from Compaq are not preinstalled on any portable. Software deliverables are available as individual SoftPaqs and can be obtained by contacting Compaq Customer Service & Support or on the Compaq Web site at www.compaq.com. For additional convenience Compaq software deliverables are also available on CD. See the section titled *Support Software* for more information.

Compaq will continue to offer support for Windows NT 3.51 support on product families where support is currently offered. This support will continue to be provided on new products within these families announced 1Q98 and earlier.

⁴¹ For the LTE 5150, 5250, 5280, 5380 and 5400 only.

WINDOWS NT 3.51 SOFTWARE DELIVERABLES

Windows NT 3.51 ⁴²	LTE 5000	Armada 1500	Armada 4100	Armada 7700 & 7300
Enabling Audio Hardware	ESS 1688 Audio Driver for Windows NT 3.51	ESS 1878 Audio Driver for Windows NT 3.51	ESS 1788 Audio Driver for Windows NT 3.51	ESS 1878 Audio Drivers for Windows NT 3.51
Enabling Video Hardware	Cirrus Logic GD7548 Display Driver Support for Windows NT 3.51 ⁴³ Cirrus Logic GD7543 Display Driver Support for Windows NT 3.51 ⁴⁴	Cirrus Logic GD7548 Display Driver Support for Windows NT 3.51	Cirrus Logic GD7548 Display Driver Support for Windows NT 3.51	S3 Aurora Display Driver Support Windows NT 3.51
Unique Compaq Software Functionality		Programmable Keys for Windows NT 3.51	Programmable Keys for Windows NT 3.51	Programmable Keys for Windows NT 3.51
Power Management, Extended Security Features and Compaq Hot Keys				Supplemental Programs for Windows NT 3.51
Enabling Storage Devices	CD-ROM Driver for Windows NT 3.51			
Enabling Networking		Armada Netflex-3 Ethernet Drivers for Windows NT 3.51	Convenience Base Ethernet Drivers for Windows NT 3.51	Armada Netflex-3 Ethernet Drivers for Windows NT 3.51
Setup & Diagnostics	Computer Setup and Diagnostics for Portables	F10 Computer Setup for Armada 1500, 7300, and 7700	Computer Setup and Diagnostics for Portables Computer Setup and Diagnostics for Portables Compaq Diagnostics for Armada 4100 Family - Ethernet Base Computer Setup for Armada 4160T	F10 Computer Diagnostics for Armada 7300 and 7700 Series F10 Computer Setup for Armada 1500, 7300, and 7700

Table 8 - Windows NT 3.51 Software Deliverables

IBM OS/2 Warp 3.0 & 4.0

Although OS/2 accounts for a small percentage of installed operating systems worldwide, it continues to maintain a significant presence within the financial services and insurance sector and in Europe in particular. Large banks and other financial services firms are using OS/2 for business-critical applications. In order to satisfy this important market segment, Compaq provides support for OS/2 Warp 3.0 & 4.0 on select portable computer platforms.

⁴² For the most up-to-date drivers, applications and patches refer to the Compaq Web site at www.compaq.com or the latest Compaq Support Software CD.

⁴³ For the Compaq LTE 5380 only.

⁴⁴ For the entire Compaq LTE 5000 family except the LTE 5380.

NOTE:

Compaq does not support OS/2 Warp on the Armada 1500 family given that the performance and mobility characteristics of this platform are not ideally suited to an OS/2 environment.

NOTE:

Compaq does not support all features of OS/2 on all portable products. These features are listed in the Supported Feature table as not being provided by Compaq. Customers who require these features under OS/2 Warp should contact IBM for more information.

Support for OS/2 Warp is provided for the LTE 5000, Armada 4100 and Armada 7000 families. Compaq supports basic audio, video and networking functionality. In addition, Compaq provides software to enable Programmable Keys and power management functionality such as standby and hibernation. Customers who encounter difficulties that are not directly related to a Compaq provided driver or utility should contact IBM directly. Refer to Table 9 for information on specific software deliverables by product family.

OS/2 Warp software deliverables from Compaq are not preinstalled on any portable platform. Software deliverables are available as individual SoftPaqs and can be obtained by contacting Compaq Customer Service & Support or on the Compaq Web site at www.compaq.com. For additional convenience Compaq software deliverables are also available on CD. See the section titled *Support Software* for more information.

For product families that currently support OS/2 Warp this support will continue to be provided on new products within these families announced 1Q98.

OS/2 WARP SOFTWARE DELIVERABLES

OS/2 Warp ⁴⁵	LTE 5000	Armada 1500	Armada 4100	Armada 7700 & 7300
Enabling Audio Hardware	ESS 1688 Audio Driver Support for OS/2 Warp 3.0	No Support	ESS 1688 Audio Driver Support for OS/2 Warp 3.0	ESS 1878 Audio Driver Support for OS/2 Warp 3.0
			ESS 1788 Audio Driver Support for OS/2 Warp 3.0	
Enabling Video Hardware	Cirrus Logic GD7548 Display Driver Support for OS/2 Warp 3.0 ⁴⁶	No Support	Cirrus Logic GD7548 Display Driver Support for OS/2 Warp 3.0	S3 Aurora Display Driver Support for OS/2 Warp 3.0
	Cirrus Logic GD7543 Display Driver Support for OS/2 Warp 3.0 ⁴⁷		QVision Display Drivers for OS/2 Warp 3.0 (V2.39 Rev A)	
	QVision Display Drivers for OS/2 Warp 3.0 (V2.39 Rev A)			
Power Management and Programmable Keys ⁴⁸		No Support	Supplemental Programs for OS/2 Warp 3.0	Supplemental Programs for OS/2 Warp 3.0

⁴⁵ For the most up-to-date drivers, applications and patches refer to the Compaq Web site at www.compaq.com or the latest Compaq Software Support CD.

⁴⁶ For the Compaq LTE 5380 only.

⁴⁷ For the entire Compaq LTE 5000 family except the LTE 5380.

⁴⁸ The Supplemental Programs Diskette for OS/2 Warp 3.0 includes the Programmable Keys utility.

OS/2 Warp ⁴⁵	LTE 5000	Armada 1500	Armada 4100	Armada 7700 & 7300
Setup & Diagnostics	Computer Setup and Diagnostics for Portables	No Support	Computer Setup and Diagnostics for Portables Computer Setup and Diagnostics for Portables Compaq Diagnostics for Armada 4100 Family - Ethernet Base Computer Setup for Armada 4160T	F10 Computer Diagnostics for Armada 7300 and 7700 Series F10 Computer Setup for Armada 1500, 7300, and 7700

Table 9 - OS/2 Warp Software Deliverables

FREQUENTLY ASKED QUESTIONS

What features are supported under Microsoft Windows 95 OSR1?

Compaq only supports those hardware features inherently supported under Windows 95 OSR1. New types of hardware supported under Windows 95 OSR2, such as 32-bit CardBus PC Cards, cannot be supported under Windows 95 OSR1. For customers who require access to the latest hardware functionality it is recommended that they keep the version of Windows 95 OSR2 preinstalled by Compaq. For customers who do not require these features and who wish to downgrade to Windows 95 OSR1, it is recommended they consult the White Paper titled *Compaq Armada Portable Products with Microsoft Windows 95 OSR1* published August 1997 for more information. This White Paper also includes valuable information about installation procedure and dependencies.

Why is OS/2 Warp not supported on the Armada 1500 family?

OS/2 Warp is supported on the Armada 7000 and Armada 4100 families. For Compaq customers using OS/2 on portable platforms, these products offer performance and mobility features that are better suited to an OS/2 environment than the Armada 1500 family.

Does IBM offer support for OS/2 Warp on Compaq portable products?

Yes, IBM does offer support for OS/2 on Compaq portable products. Customers with questions that relate to specific IBM OS/2 upgrades, enhancements or patches should contact IBM directly. For questions about enabling basic hardware functionality inherently supported by OS/2 Warp 3.0 or questions regarding Compaq software deliverables for OS/2 Warp 3.0, customers should contact Compaq Customer Service & Support.

Does Compaq support UNIX on any portable platforms?

Compaq does not support any version of UNIX on its portable computers. Customers who wish to use UNIX on a Compaq portable should contact the operating system vendor directly for support.